

Arizona Statewide TERM Report

Training & Education Resource Model

Score = average of the five percentiles, using weights 3, 3, 1, 1, 1
see notes for explanations of each column

Rank	CIP Code	CIP Title	P e r c e n t i l e s						Labor Market Data					BLS Ed & Train Code
			Score	Open-ings	Wage	ONET	Growth rate	Turn over ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate %	Turn over ratio	
1	51.16	Nursing	87.7	95	84	95	75	81	3836	21.69	653	10.6	3.1	7.0
2	51.06	Dental Support Services and Allied Professions	78.9	72	76	74	95	95	739	19.92	593	13.5	4.7	8.9
3	46.03	Electrical and Power Transmission Installers	78.8	86	59	97	93	82	1568	17.64	660	13.2	3.3	9.2
4	52.02	Business Administration, Management and Operations	78.7	88	87	88	40	54	1653	22.16	619	6.7	1.7	8.0
5	51.09	Allied Health Diagnostic, Intervention, and Treatment Professions	77.6	76	67	92	89	86	1124	19.08	634	12.4	3.5	7.1
6	15.05	Environmental Control Technologies/Technicians	71.5	60	61	98	86	94	417	17.89	666	12.3	4.7	9.0
7	47.02	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance	71.1	53	60	99	100	99	276	17.83	721	14.7	6.4	9.0
7	52.99	Business, Management, Marketing, and Related Support Services, Other	71.1	78	89	41	47	50	1202	22.59	512	6.9	1.7	9.2
9	46.05	Plumbing and Related Water Supply Services	70.3	84	50	69	85	77	1456	16.48	576	12.3	2.7	9.4
10	43.01	Criminal Justice and Corrections	68.0	90	50	91	52	47	2887	16.52	630	7.4	1.6	9.9
11	22.03	Legal Support Services (NEW)	67.0	65	68	35	69	98	510	19.10	499	9.6	5.0	6.7
11	46.02	Carpenters	67.0	93	43	33	80	83	3528	15.09	492	11.1	3.4	9.3
13	52.19	Specialized Sales, Merchandising, and Marketing Operations (NEW)	66.7	80	74	48	41	49	1219	19.62	544	6.8	1.7	9.0
14	52.15	Real Estate	66.6	67	99	49	20	32	580	32.57	544	5.1	1.4	7.2
15	15.1	Construction Engineering Technologies	66.6	38	88	79	72	70	97	22.18	597	9.8	2.4	6.9
16	46.04	Building/Construction Finishing, Management, and Inspection	66.0	96	36	22	92	85	5125	14.36	469	12.7	3.4	9.9
17	46.01	Mason/Masonry	65.9	77	45	39	96	93	1157	15.91	508	13.6	4.4	9.2
18	52.01	Business/Commerce, General	65.8	29	95	81	70	69	57	26.04	605	9.6	2.4	8.0
19	14.18	Materials Engineering	65.2	24	93	84	78	75	43	24.94	607	10.8	2.6	8.0

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			Score	Open-ings	Wage	ONET	Growth rate	Turn over ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate %	Turn over ratio	
19	14.19	Mechanical Engineering	65.2	24	93	84	78	75	43	24.94	607	10.8	2.6	8.0
19	14.33	Construction Engineering (NEW)	65.2	24	93	84	78	75	43	24.94	607	10.8	2.6	8.0
19	14.36	Manufacturing Engineering (NEW)	65.2	24	93	84	78	75	43	24.94	607	10.8	2.6	8.0
23	31.05	Health and Physical Education/Fitness	64.1	49	73	72	71	68	210	19.57	584	9.6	2.3	7.8
24	13.13	Teacher Education and Professional Development, Specific Subject Areas	63.8	62	46	89	83	78	456	15.91	620	12.1	2.8	7.8
25	43.02	Fire Protection	63.7	59	75	100	44	26	406	19.71	742	6.9	1.2	8.8
26	30.16	Accounting and Computer Science (NEW)	63.5	42	81	68	50	84	125	21.04	575	7.2	3.4	6.0
27	51.07	Health and Medical Administrative Services	63.1	91	42	40	59	71	2914	15.02	510	8.8	2.4	9.2
28	15.08	Mechanical Engineering Related Technologies/Technicians	62.8	69	56	90	55	43	652	17.10	622	7.7	1.6	6.8
29	51.08	Allied Health and Medical Assisting Services	62.6	85	22	59	91	92	1459	12.47	565	12.6	4.4	8.9
30	19.02	Family and Consumer Sciences/Human Sciences Business Services	62.5	54	62	67	65	79	297	17.95	571	9.2	2.8	8.0
31	47.06	Vehicle Maintenance and Repair Technologies	61.6	81	55	61	50	34	1306	17.06	567	7.1	1.4	7.7
32	15.12	Computer Engineering Technologies/Technicians (NEW)	61.3	52	82	64	21	62	241	21.05	568	5.3	2.2	6.0
33	1.01	Agricultural Business and Management	60.7	73	66	44	29	55	826	18.72	528	5.8	1.7	8.4
33	52.09	Hospitality Administration/Management	60.7	58	58	87	48	61	373	17.51	611	7.0	2.0	8.5
33	52.17	Insurance (NEW)	60.7	74	72	43	28	37	875	19.56	524	5.7	1.5	9.7
36	49.02	Ground Transportation	60.3	94	41	36	38	65	3792	14.83	502	6.7	2.3	10.4
37	46.99	Construction Trades, Other	60.3	92	28	2	90	91	3056	13.32	380	12.5	4.4	9.7
38	49.01	Air Transportation	59.0	50	96	25	17	50	226	28.78	477	5.1	1.7	8.6
39	51.15	Mental and Social Health Services and Allied Professions	58.6	63	24	71	99	96	474	12.76	582	14.6	4.8	10.0

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			Score	Open-ings	Wage	ONET	Growth rate	Turn over ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate %	Turn over ratio	
40	15.02	Civil Engineering Technologies/Technicians	57.5	28	77	73	62	67	54	19.98	590	9.1	2.3	6.0
41	4.09	Architectural Technology/Technician (NEW)	56.8	35	69	75	67	56	72	19.16	594	9.5	1.8	7.0
42	9.09	Public Relations, Advertising, and Applied Communication (NEW)	56.5	43	79	47	39	58	150	20.44	540	6.7	1.8	10.0
43	51.26	Health Aides/Attendants/Orderlies	56.0	83	5	60	82	97	1383	9.61	566	11.7	4.9	11.0
44	47.03	Heavy/Industrial Equipment Maintenance Technologies	54.5	68	39	86	53	30	581	14.53	611	7.5	1.3	10.1
45	52.04	Business Operations Support and Assistant Services	54.3	98	23	19	49	59	12364	12.65	464	7.1	1.9	10.6
46	52.16	Taxation	54.1	17	90	3	74	87	34	23.57	382	10.5	3.7	10.0
47	13.12	Teacher Education and Professional Development, Specific Levels and Methods	53.8	66	17	38	97	100	551	12.08	506	13.8	6.6	7.5
48	11.03	Data Processing	51.8	48	64	50	18	63	209	18.32	548	5.1	2.2	7.6
49	15.13	Drafting/Design Engineering Technologies/Technicians (NEW)	51.7	47	70	76	19	20	194	19.31	594	5.1	1.0	7.0
49	48.05	Precision Metal Working	51.7	79	40	30	45	35	1216	14.62	487	6.9	1.4	9.6
51	51.18	Ophthalmic and Optometric Support Services and Allied Professions	51.4	56	18	51	98	90	339	12.15	552	14.1	4.0	9.8
52	44.04	Public Administration	50.6	3	97	80	30	46	14	29.53	602	5.9	1.6	8.0
53	1.06	Applied Horticulture/Horticultural Business Services	50.5	97	12	12	68	48	5944	11.31	450	9.5	1.7	10.7
54	15.03	Electrical Engineering Technologies/Technicians	50.3	40	83	58	11	15	116	21.06	562	3.3	0.9	6.0
55	48.08	Boilermaking/Boilermaker (NEW)	49.7	17	80	26	84	45	34	20.71	479	12.3	1.6	9.0
56	19.09	Apparel and Textiles	49.3	27	78	66	36	27	44	20.27	571	6.4	1.3	8.0
57	52.03	Accounting and Related Services	49.3	89	29	16	31	44	2364	13.77	459	5.9	1.6	10.0
58	52.18	General Sales, Merchandising and Related Marketing Operations (NEW)	48.6	99	11	29	60	19	16085	11.22	484	8.8	1.0	10.8

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			Score	Open-ings	Wage	ONET	Growth rate	Turn over ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate %	Turn over ratio	
59	19.07	Human Development, Family Studies, and Related Services	48.4	75	2	50	73	80	1105	8.41	548	10.3	2.9	10.0
60	47.01	Electrical/Electronics Maintenance and Repair Technology	48.3	70	51	31	15	24	666	16.73	488	4.5	1.2	8.2
61	15.11	Engineering-Related Technologies	46.7	32	48	54	88	38	62	16.20	555	12.4	1.5	10.0
61	45.07	Geography and Cartography	46.7	32	48	54	88	38	62	16.20	555	12.4	1.5	10.0
63	1.02	Agricultural Mechanization	45.2	50	54	65	12	18	212	17.04	570	3.9	1.0	7.7
64	15.07	Quality Control and Safety Technologies/Technicians	45.0	57	35	62	34	33	340	14.33	568	6.1	1.4	9.9
65	13.15	Teaching Assistants/Aides	44.4	82	3	11	61	72	1329	8.98	436	9.0	2.6	11.0
66	47.99	Mechanic and Repair Technologies/Technicians, Other	44.2	21	63	0	81	64	41	18.04	344	11.6	2.2	10.0
66	51.1	Clinical/Medical Laboratory Science and Allied Professions	44.2	45	30	63	58	53	175	13.84	568	8.3	1.7	7.3
68	50.03	Dance	43.6	30	52	34	94	17	61	16.82	495	13.5	1.0	8.0
69	12.05	Culinary Arts and Related Services	43.6	100	1	18	57	14	18984	7.98	462	8.1	0.8	10.7
70	15.99	Engineering Technologies/Technicians, Other	43.1	19	71	32	35	51	35	19.47	488	6.4	1.7	6.0
71	52.08	Finance and Financial Management Services	42.7	87	19	20	26	21	1581	12.15	466	5.6	1.0	10.9
72	19.05	Foods, Nutrition, and Related Services	41.0	71	15	37	46	29	739	11.70	503	6.9	1.3	8.7
73	15.06	Industrial Production Technologies/Technicians	40.8	0	86	94	6	8	11	21.93	649	3.0	0.7	6.0
73	15.15	Engineering-Related Fields (NEW)	40.8	0	86	94	6	8	11	21.93	649	3.0	0.7	6.0
75	1.1	Food Science and Technology	39.7	5	57	78	56	36	16	17.13	595	7.8	1.5	6.0
76	49.99	Transportation and Materials Moving, Other	37.8	4	100	27	1	1	15	37.11	481	0.2	0.0	8.0
77	12.99	Personal and Culinary Services, Other	37.7	6	98	21	3	4	16	30.29	467	1.2	0.4	8.0
78	25.03	Library Assistant	34.9	51	20	46	43	12	235	12.25	535	6.9	0.8	11.0

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			Score	Open-ings	Wage	ONET	Growth rate	Turn over ratio	Open-ings	Hourly Wage	ONET Score	Growth Rate %	Turn over ratio	
79	41.03	Physical Science Technologies/Technicians	34.1	14	53	45	33	28	28	16.89	534	6.1	1.3	7.3
80	47.04	Precision Systems Maintenance and Repair Technologies	33.6	30	27	23	51	57	61	12.99	470	7.2	1.8	8.1
81	15.04	Electromechanical Instrumentation and Maintenance Technologies/Technicians	33.6	13	65	52	8	7	27	18.47	552	3.0	0.6	9.1
81	19.06	Housing and Human Environments	33.6	16	47	8	54	52	31	16.09	411	7.6	1.7	9.0
83	12.03	Funeral Service and Mortuary Science	33.0	15	44	70	27	25	28	15.23	577	5.7	1.2	8.3
84	41.01	Biology Technician/Biotechnology Laboratory Technician	32.9	2	37	77	37	66	12	14.43	595	6.6	2.3	6.0
85	1.05	Agricultural and Domestic Animal Services	31.2	34	4	42	66	60	69	9.49	516	9.4	2.0	11.0
86	10.03	Graphic Communications (NEW)	29.7	55	26	4	10	10	327	12.96	383	3.1	0.7	9.9
87	12.04	Cosmetology and Related Personal Grooming Services	29.2	61	6	24	14	23	438	9.85	470	4.2	1.2	7.0
88	1.08	Agricultural Public Services (NEW)	29.0	9	38	96	13	13	21	14.45	654	4.1	0.8	9.0
89	9.04	Journalism	27.9	11	33	56	24	41	23	14.24	560	5.5	1.5	9.0
89	50.01	Visual and Performing Arts, General	27.9	11	33	56	24	41	23	14.24	560	5.5	1.5	9.0
89	50.06	Film/Video and Photographic Arts	27.9	11	33	56	24	41	23	14.24	560	5.5	1.5	9.0
92	10.02	Audiovisual Communications Technologies/Technicians (NEW)	25.5	37	21	14	22	22	93	12.46	456	5.5	1.1	10.2
93	1.04	Agricultural and Food Products Processing	25.4	44	13	28	16	16	152	11.53	483	4.9	0.9	10.5
94	44.02	Community Organization and Advocacy	25.2	41	31	6	4	3	121	14.03	394	1.5	0.3	10.0
95	50.04	Design and Applied Arts	24.1	22	25	15	32	31	42	12.90	458	5.9	1.3	9.9
96	1.03	Agricultural Production Operations	23.3	64	0	17	0	0	494	6.85	460	-1.5	0.0	11.0
97	30.19	Nutrition Sciences (NEW)	23.3	7	8	9	64	89	17	10.18	432	9.1	3.7	10.0
97	51.31	Dietetics and Clinical Nutrition Services (NEW)	23.3	7	8	9	64	89	17	10.18	432	9.1	3.7	10.0

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99	43.99	Security and Protective Services, Other	22.4	36	10	13	42	11	83	10.57	455	6.8	0.8	10.5
100	48.07	Woodworking	21.5	46	14	5	5	5	185	11.70	387	2.8	0.5	9.4
101	11.06	Data Entry/Microcomputer Applications (NEW)	18.7	39	16	1	2	2	106	11.72	351	0.6	0.3	10.0
102	48.03	Leatherworking and Upholstery	11.3	20	7	7	9	6	37	10.16	395	3.1	0.6	9.0

Explanations for Each Column of the TERM Report		
Column		Explanation
A	Rank	This is the rank of the CIP (Classification of Instructional Program) by percentile score as shown in column D. Tie scores get tie ranks. Sometimes scores appear to be a tie, but if carried out to more decimal places, are not. Such CIPs are not assigned tie ranks.
B	CIP Code	CIP (Classification of Instructional Programs) code as assigned by the U.S. Department of Education. See Sources note below for more details.
C	CIP Title	The title of the training program, as assigned by the U.S. Department of Education Classification of Instructional Programs.
D	Score	The score is a weighted average of columns E through I. The weights used are 3, 3, 1, 1, 1, respectively. See Calculation Method note below for more details.
E-I	Percentiles	These 5 columns are the percentile scores of the data in columns J through N. Percentiles scores are used to compute different types of data in the model. For example, wages in dollars and growth in percentages. Tie scores produce tie percentiles.
J	Openings	The projected number of openings expected per year for the occupations within this CIP. If an occupation is contained in more than one CIP, its openings are distributed evenly among those CIPs. Projected openings based on 2004-2006 occupation projections.
K	Hourly Wage	The average of the wages of the occupations contained in this CIP, weighted by the number of openings in each occupation. Wages based on 2004 Occupational Employment Statistics (OES) survey.
L	O*NET Score	O*NET is an acronym for the Occupational Information Network (http://www.onetcenter.org/). This data is a measure of the skills, knowledge, and abilities required for the occupations within this CIP, weighted by the number of openings in each occupation. The numerical score for each comparative occupational descriptor in the O*NET Knowledge, Skills, and Abilities data files were summed for each occupation. See Sources note below for more information.
M	Growth Rate	The two-year projected rate of growth in employment of the occupations in this CIP, weighted by the number of openings in each occupation. This number could be negative but usually is not. Occupational growth rate is from the 2004-2006 Occupational Projections produced by the AzDES Research Administration.
N	Turnover Ratio	This is the projected number of annual openings due to growth divided by the projected number of annual openings due to replacement (like retirements, quits, promotions, etc.). Higher ratios indicate lower turnover. Based on the 2004-2006 occupational projections data.
O	BLS Education & Training Code	The job training and educational levels as assigned by the Bureau of Labor Statistics (BLS). See detailed descriptions of the BLS codes on page two of these notes. Note that a higher code number indicates a lower amount of education or training time.

Calculation method	
1	Hourly wages were calculated by dividing annual wages by 2080.
2	The O*NET score was first calculated by occupation using the SOC (Standard Occupational Code). The scores for each 6-digit SOC were calculated by averaging the scores for the 8-digit O*NET SOC's that comprise each 6-digit SOC.
3	The field of occupations was restricted to those whose BLS Training and Educational code was between 6 and 11 (occupations which require 2 years of training or less.) Note that the lower the training and educational time requirement, the higher the code numbers (see below).
4	Scores by CIP (Classification of Instructional Programs) (except openings) were calculated by taking an openings-weighted average of the occupations in the CIP. For occupations appearing in more than one CIP, openings were evenly distributed among the CIP.
5	Percentiles were calculated for each statistic shown. In case of a tie, the same percentile was assigned to all CIP's involved in the tie.
6	The following formula determined the score for each CIP: $(3 \times \text{openings percentile} + 3 \times \text{wage percentile} + \text{O*NET percentile} + \text{growth percentile} + \text{ratio percentile}) / 9$
BLS (Bureau of Labor Statistics) Education and Training Codes	
1-5	Bachelor's degree and higher educational levels were not used for this project.
6	Associate degree
7	Post-secondary vocational training
8	Work experience in related occupation
9	Long-term on-the-job training
10	Moderate-term on-the-job training
11	Short-term on-the-job training
Sources	
1	Openings and wage data are produced by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics. Wages are from the 2004 Occupational Employment Statistics (OES) survey, and openings are from the 2004-2006 occupational employment projections.
2	For the O*Net score, the O*Net database version 8.0 was used. (www.onetcenter.org/database.html)
3	CIP / SOC (Standard Occupational Classification) crosswalk source: National Crosswalk Service Center, Department of Education, Des Moines IA 50319, Telephone: 515-242-5034, E-mail: NCSC@ed.state.ia.us .
4	The education and training codes are from the Bureau of Labor Statistics (BLS) website at ftp://ftp.bls.gov/pub/special.requests/ep/optddata/optd0212.txt
Questions and Comments	
	Direct questions or comments to Rick Van Sickle, 602-542-6481, John Graeflin, 602-542-6492, or Don Wehbey, 602-542-3686, at Research Administration, Arizona Department of Economic Security.